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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,561

09/27/2006

Kazumasa Tanida

AI-427NP

5593

23995

7590

03/05/2012

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EXAMINER

ARROYO, TERESA M

ART UNIT

PAPER NUMBER

2826

MAIL DATE

DELIVERY MODE

03/05/2012

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/594,561	<b>Applicant(s)</b> TANIDA ET AL.	
	<b>Examiner</b> TERESA M. ARROYO	<b>Art Unit</b> 2826	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2012.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 16-23, 25-37, 103 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-23 and 25-37 is/are allowed.
- 6) ☒ Claim(s) 103 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08/18/09 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "other wiring board" of claim 28 and the "two or more semiconductor chips" of claim 29 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: There is no support in the disclosure for the limitations of amended claim 32 and the underlined limitations of new claim 103 (which should not be underlined since it is a new claim).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 103 rejected under 35 U.S.C. 102(b) as being anticipated by US Patent Pub. No. 2004/0061240 to Seko.

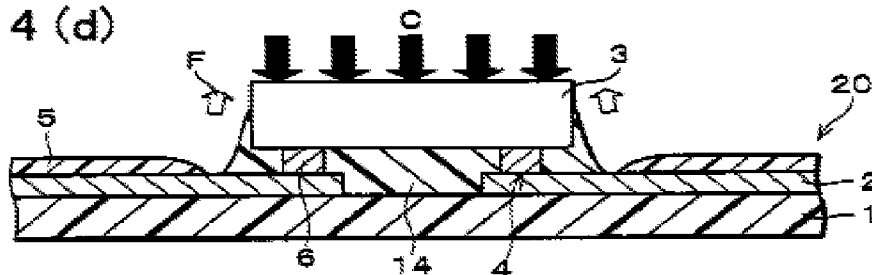
Regarding claim 103, Seko discloses A semiconductor device, comprising:  
a solid state device 1 having a surface (top) and an external connection surface (bottom) which is a surface on a side opposite the surface (top),  
a semiconductor chip 3 having a functional surface (bottom),  
a connecting member 6 provided between the surface (top) of the solid state device 1 and the functional surface (bottom) of the semiconductor chip 3, the connecting member 6 extending over a distance between the surface (top) of the solid state device 1 and the functional surface (bottom) of the semiconductor chip 3 and having a constant width,

an insulating film 5 provided on the surface (top) of the solid state device 1, the insulating film 5 having an opening (unlabeled) greater in size than the semiconductor chip 3, and

a sealing layer 14 that completely seals the opening (unlabeled) and a space between (unlabeled) the solid state device 1 and the semiconductor chip 3,

wherein the sealing layer 14 does not cover an upper surface of the insulating film 5 and the sealing layer 14 covers a side face (unlabeled) of the semiconductor chip 3 up to a middle portion of the side face with respect to a thickness direction of the semiconductor chip 3.

**FIG. 4 (d)**



***Allowable Subject Matter***

Claims 16-23 25-37 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: None of the cited prior art discloses or teaches a semiconductor device capable of preventing a void from occurring in a sealing layer wherein a lateral distance between an outer periphery of the semiconductor chip and an edge of an opening of an insulating film is 0.1 mm or more.

***Response to Arguments***

Applicant's arguments filed 01/05/12 have been fully considered but they are not persuasive. Applicants argue that the features of new claim 103 are not taught by any of the art of record. In response, since claim 103 does not contain the allowable subject matter of former claim 24, it is not allowable.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The other cited prior art on PTO-892 teaches a sealing layer not formed on an insulating film and provided to partially cover a semiconductor chip.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to TERESA M. ARROYO whose telephone number is (571)272-7260. The examiner can normally be reached on M-F, varying hours 5:30 AM-10:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Davienne Monbleau can be reached on (571) 272-1945. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TERESA M ARROYO/  
Examiner, Art Unit 2826